

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/680,469
Attorney Docket No. Q61083

REMARKS

I. Formal Matters

Applicant thanks the Examiner for initialing the references listed on form PTO-1449 submitted with the Information Disclosure Statements filed on June 24, 2003 and on October 6, 2000.

Additionally, Applicant thanks the Examiner for acknowledging the claim to foreign priority under 35 U.S.C. § 119(a)-(d) and for confirming that the certified copies of the priority documents have been received.

II. Preliminary Matters

The Examiner objected to the disclosure because of informalities. Applicant herein amends the specification to correct the informalities on page 4, line 25 and page 12, line 4. Additionally, claim 6 has been objected to because “the step should be replaced with “a step.” Claim 6 has been amended to address the objection. Therefore, Applicant respectfully requests the Examiner to withdraw the objections.

III. Claims

Claims 1-6 are pending in the application. Claims 2, 3, and 5 are allowed. Claim 6 has been amended to address the Examiner’s objections and better conform it to PTO practice. The amendment does not narrow the scope of the claim. Claim 4 has been amended to make the claim more definite. The amendment does not narrow the scope of the claim.

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A. Rejections under § 112. Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. As mentioned above, Applicant has amended claim 4 in order to more clearly recite the invention. As amended, claim 4 overcomes any indefiniteness under 35 U.S.C. § 112, second paragraph. Accordingly, Applicant respectfully requests that the rejection of claim 4 under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

B. Rejections under § 103. Claims 1 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Uesugi (U.S. Patent No. 6,404,827 B1, hereinafter “Uesugi”) in view of Sterzer (U.S. Patent No. 5,260,711, hereinafter “Sterzer”). Applicant traverses the rejection because the cited references fail to disclose or suggest all of the claim limitations. Specifically, the cited references fail to disclose or suggest at least the following limitations:

Claim 1: A delayed decision feedback sequence estimation diversity receiver comprising:
means for extracting a plurality of reception signals by using a plurality of antennas when estimating a transmission signal from reception signals having undergone transmission path distortion; ... means for combining impulse response sequences in transmission paths while canceling delayed wave components having the largest amplitudes in delayed wave component sequences in impulse response sequences in the respective transmission paths; ...

Claim 6: A delayed decision feedback sequence estimation method comprising:
extracting a plurality of reception signals by using a plurality of antennas when estimating a

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transmission signal from a reception signal having undergone transmission path distortion; ... combining impulse response sequences in transmission paths while canceling delayed wave components having the largest amplitudes in delayed wave component sequences in impulse response sequences in the respective transmission paths; and ...

As an initial matter, neither reference discloses a means for extracting a plurality of reception signals. The Examiner has not pointed to a specific cite within Uesugi that shows this extracting means. "When the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference." *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (*citing In re Yates*, 663 F.2d 1054, 211 USPQ 1149, 1151 (CCPA 1981)).

The channel impulse estimators of Uesugi only estimate the channel impulse responses to the signals received by the antenna (*see*, col. 8, ln. 9-11, Uesugi). They do not correlate to the means for extracting as disclosed in the claimed invention. Uesugi does not disclose a means for extracting a plurality of reception signals by using a plurality of antennas.

To establish a *prima facie* case of obviousness one of the elements that the Examiner must establish is that the prior art references teach or suggest all of the claim limitations in the rejected claims. See MPEP § 2143. Here, the extracting means is not even disclosed in Uesugi or Sterzer.

In addition, the Examiner correctly concedes that Uesugi fails to disclose canceling delayed wave components having the largest amplitudes. The Examiner cites Sterzer to make up

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for this deficiency. However, Sterzer fails to cure the deficiency because Sterzer only teaches canceling the unwanted uncorrelated noise power contribution of one of the incoming radio waves which is the largest contributor to the total unwanted uncorrelated noise power (*see*, col. 10, ln. 45-48, Sterzer). These incoming radio waves are distinguished in that they arrive from different given directions (*see*, col. 9, ln. 1-2, Sterzer). However, the claimed invention teaches canceling delayed wave components with the largest amplitudes in the delayed wave component sequences in impulse response sequences in the respective transmission paths. The claimed invention focuses on canceling delayed wave components from distinct transmission paths while the incoming waves of Sterzer arrive from different directions.

Therefore, for at least the reasons set forth above Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to the present invention. Even if the above combination was made, the result would not teach or suggest each and every feature of the claimed invention.

In view of the foregoing, Applicant respectfully requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of independent claims 1 and 6.

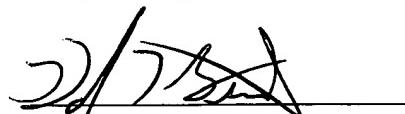
III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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